EDITORIAL NOTES.

M. L'ABBÉ ANZI, an Italian lichenologist, died recently.

PROF. DR. TH. NITSCHKE, director of the Botanic Gardens in Münster, Germany, died August 30, in his fiftieth year.

PROF. WM. TRELEASE gave four lectures during the month of January before the Johns Hopkins University, on the fertilization of flowers.

DR. GEO. VASEY, in the December *Torrey Bulletin*, describes two new species of grasses, *Agropyrum Scribneri* from Montana, and *Sporobolus Buckleyi* from Texas.

CARL SALOMON has recently published "Nomenclator der Gefässkryptogamen," giving the genera, species, synonymy and distribution of the higher cryptogams; a much needed work.

BULLETIN No. 7 of the Illinois State Laboratory of Natural History, to be issued soon, will be devoted to a "Descriptive Catalogue of the North American Hepaticæ," by Prof. L. M. Underwood, of Syracuse University.

PROF. BURRILL calls attention in *Science Record* to a common mistake of supposing that *pébrine* of silk-worms is caused by *Micrococcus bombycis*, when instead it produces the quite distinct disease of *schlaffsucht* to which caterpillars are subject.

THE BULLETIN of the Botanical Society of France contains an account of the germination of the oospores of *Peronospora viticola*, the grape mildew, stating that, contrary to preconceived opinion, zoospores are not formed, but a mycelial tube is at once pushed out.

IN THE JANUARY *Naturalist* Prof. Bessey gives an account (with cuts) of hybridism in *Spirogyra*, observed last August at Ames. *S. majuscula* and *S. protecta* were seen to conjugate, the zygospore resembling those of *S. protecta*, this species also being functionally the female.

G. HABERLAUDT SHOWS that the so-called rudimentary fibro-vascular bundle in the center of the stems of mosses is a water-conducting bundle. An aqueous solution of resin rises in the central bundle only, and quite rapidly there, when the cut end of a stem is immersed in it.

THE STATES OF Indiana, Illinois, Michigan and Wisconsin are included in the last "Contributions toward a List of the State and Local Floras of the U. S." by W. R. Gerard and N. L. Britton. This list, when completed, will prove a most valuable one, as, judging by our own State, it is a most reliable one.

AT THE NOVEMBER meeting of the San Diego Natural History Society Dr. Parry gave an interesting account of the singular *Pinus Torreyana*, which was discovered by him in 1850. As the range of this species is confined to a narrow strip of coastline not more than four miles long, the society is taking measures for its preservation.

IN SCIENCE GOSSIP for January, W. B. Grove gave some "Notes on Yeast-Fungi," being a translation from Dr. Winter's edition of the "Kryptogamen-Flora," with notes by the translator. Twelve species are described and figured.

CINCHONA LEDGERIANA has been having quite an airing in the *Journal of Botany*, the last number adding still another to the long list of papers on the subject. The editor probably voices the wish of all his constituency when he brackets at the close of the article these words: "This discussion is now closed.—ED. JOURN. BOT."

THE "FUNGUS FORAYS" of the Natural History societies of Britain were not so successful last season as usual, owing to unfavorable weather and a scarcity of specimens. Probably the most interesting item was the finding of thirty-four species of *Cortinarius* in the vicinity of Hereford, during a four days gathering of the Woolhope Field Club.

IT SEEMS THAT *Sphæria Coulteri*, Peck, collected in 1872 near Yellowstone Lake, turns out to be the representative of a new genus, which Professor Saccardo describes in the *Torrey Bulletin* for December, and names *Neopeckia*, thus associating Professor Charles H. Peck's name with that of the writer in a way that is very pleasant to the latter.

LIGNIFICATION HAS HERETOFORE been supposed to be confined to internal tissues, but A. Lemaire shows (Ann. Sci. Nat. xv, p. 297) that the epidermal cell walls may undergo this change. A section of the epidermis, transferred from an alcoholic solution of phloroglucin to hydrochloric acid, has its lignified parts colored a beautiful rose-red.

IN 1882 MR. A. STEPHEN WILSON published an account of the discovery of certain bodies found in potato leaves, which he claimed to be sclerotia of *Phytopthora infestans*, which view Mr. Plowright accepted. In the December *Journal of Botany*, Mr. Murray and Dr. Flight publish the results of an investigation of specimens furnished by Mr. Wilson, which go to show that the so-called sclerotia are merely masses of oxalate of lime.

HECKEL GIVES an account in the *Bulletin* of the *Société géogr. de Marseille* of the African nut called Kola. It is the product of a tree belonging to the order *Sterculiaceæ* of which the chocolate tree of tropical America is a member. The chemical composition of the two fruits is much alike. Kola is very highly esteemed by the African tribes, often bringing its weight in gold-dust, and in periods of scarcity a slave being required for a single nut.

BYRON D. HALSTED, in *Science* for Jan. 11, contends for the use of italics in printing scientific names, which does not accord with the practice in that periodical, nor the views of its editor. *Science* is a radical in the use of type, and some of the changes introduced seem not a little absurd to those acoustomed to a very different order of things. In reference to the use of italics for scientific names, however, the writer has found its greatest convenience in the saving of time. Such names are thus made catch-words, and a glance down a page reveals the species spoken of and invites either to skipping or a closer reading.

BOTANICAL MICRO-CHEMISTRY is growing in importance if one may judge by the number of reagents coming into use. Eighty-eight, including *only the more important ones* in use up to June, 1883, are now advertised by Dr. Theodor Schuchardt (Görlitz). While only a very few of these are necessary in the ordinary study of histology, many of them are absolutely indispensable in the delicate investigations concerning the nucleus, bacteria, contents of cells, nature of cell walls, etc.

THE HANDBOOK of British Fungi, by M. C. Cooke, published in 1871, has been almost as useful to students in this country as in England, and the announcement of a revised edition will meet with special favor from American botanists. The author, being unable to prepare the whole work at once, will give the Hymenomycetes in an appendix to *Grevillea*. The first installment in the December number, beginning with the white-spored agarics, embraces descriptions of thirty-eight species.

A PAPER HAS RECENTLY been read before the Linnean Society, by Mr. A. W. Bennett, on the reproduction of the *Zygnemaceæ*. His investigations go to support the views of De Bary and Wittrock, long since stated, that there are sexual differences in the conjugating cells. The cell taken to represent the female is greater in length and diameter than the other, and it is found that the protoplasmic contents pass only in one direction, and that change first begins in the chlorophyll bands of the supposed male cells.

SECTIONS OF DIATOMS have been obtained by W. Prinz, by a rather unexpected method. Sections made by imbedding a mass of diatoms in gum and cutting with a razor not proving satisfactory, Prinz boiled pieces of diatomaceous earth in Canada balsam and then ground fragments thin by the same process used in preparing mineral sections. He says: "In this way I have obtained thin laminæ of about a square centimeter in surface, containing hundreds of sections at right angles to the long axis of the frustule. These preparations * * * were of extreme thinness, in spite of the friability of the material."

PROF. D. S. JORDAN, in a recent visit to England, strolled into the village of Down in Kent, and talked with some of the villagers about Mr. Darwin. It is astonishing what little knowledge of his greatness had spread around his home. Among much interesting testimony from the villagers, the following statement of Mr. Parslow, for many years his personal servant, is especially interesting to botanists:

"The gardener used to bring plants into his room often of a morning, and he used to tie bits of cotton on them, and try to make them do things. He used to try all sorts of seeds. He would sow them in pots in his study."—*Am. Nat.*

VOLVOX GLOBATOR has long been considereda *hollow* spherical colony of unicellular algæ. Mr. J. Levick thinks that *Volvox* is not hollow but that the colony encloses a perfectly transparent gelatinous material which can be made evident by transferring some roughly handled (and probably thus ruptured) *Volvoces* to water containing powdered carmine. The carmine will adhere to surfaces exposed by the rupture of the superficial colony. Of sections of Volvox

he says: "The contents are so perfectly colorless that they are quite imperceptible in water, unless it be charged with suspended matter, and then only show their presence by displacing this matter from the space which they occupy themselves."

THE WRITER READ recently an article, written by some enthusiastic convert, which was considered to contain some startling proofs of the doctrine of evolution. It is not worth mentioning, except that it represents a class of dabblers in science who, through gross ignorance, misinterpret discoveries and spring their startling deductions upon a gullable public. As it is this class that courts the daily press, and especially infests the weekly, the public mind is generally in an abused condition. The "mycologist" referred to had evidently read Dr. Cooke's little book on fungi, and at once became an ardent theorizer. He now claims that he can prove evolution off hand, for his reading of fungi literature assures him that it is a common thing for one genus to turn into another, and even for neighboring families to lose their identity in each other. *Uredo*, *Æcidium*, *et al.*, are to him genera, whose partition walls can be broken down only to prove the doctrine of evolution. To all this an agriculturist remarks: "If these things are so, can we stand out longer against the 'wheat and cheat' idea?" With such enthusiastic expounders, mycology, evolution and agriculture ought all to flourish, and the public mind be kept in a feverish state of excitement.

IN THIS DAY of hasty publication of new species, when every collector feels competent for this difficult work, it is refreshing to read in the *Naturalist* some suggestions by Prof. Bessey in regard to the publication of new species. There is no doubt that the right to describe stimulates the study of Systematic Botany, but such stimulation too often results in utter confusion. As cautious as the editors of this journal have been in this respect, and they are conscious of having frequently given offense to contributors, they have published species that had no right to stand, and they are perfectly willing to adopt either of the following suggestions of Prof. Bessey:

1. Every description to be accompanied by the statement that type specimens were deposited in this or that established herbarium.
2. Every description to be accompanied by specimens to be distributed by the editor of the journal giving such publication.

The third suggestion, that specimens should be deposited in the National Herbarium, is too restricted when we consider the present relative importance of our herbaria. We consider the first suggestion as the most feasible, and the second as most complete, but impracticable.

CURRENT LITERATURE.

Notes on the Cryptogamic Flora of the White Mountains. By W. G. Farlow. Extr. from Appalachia, vol. III., part 3, Jan. 1884, pp. 232–251.

This is an important contribution to the flora of a district of which the flowering plants have been well known for many years, but the algæ and fungi of which have been almost totally neglected. As a contribution to a knowledge